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Steinbrecher

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(54) **SYSTEM AND METHOD FOR MEASURING SHORT DISTANCES**

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Information Disclosure Statement Pursuant to 37 CFR § 1.97b executed by Attorney of Record Michael F. Oglo on Nov. 19, 2002, filed as an earlier paper in the above-referenced patent appliation, with a PTO indicated filing date of Jan. 17, 2002, but which on page 1 thereof has 37 CFR § 1.8 mailing certificate which indicates a filing date of Nov. 19, 2001, and which is hereby incorporated by reference into the submissions accompanying this form 1449.
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(57) **ABSTRACT**

A system and method are provided to measure relatively short distances between one or more moveable objects and with respect to an environment. The transponders may be affixed to other moveable objects and/or may be affixed in position within the environment. The transponders detect the query signal and respond with an acoustic response signal. A synchronized clock system establishes common timing between the transponders and the moveable objects such that the start time at which the acoustic response signal is sent is known. The moveable object detects a receipt time when the acoustic response signal is received. Knowing the start time and the receipt time, a transit time for the acoustic signal can be determined whereby a separation vector may be calculated. The system may be used to determine and transmit a table that contains the relative positions of all moveable objects in the environment.

20 Claims, 3 Drawing Sheets